

L Number	Hits	Search Text	DB	Time stamp
1	136312	hierarch\$4 tree	USPAT; US-PGPUB; IBM_TDB	2004/05/25 10:58
2	11898	(hierarch\$4 tree) same class\$7	USPAT; US-PGPUB; IBM_TDB	2004/05/25 10:39
3	765	((hierarch\$4 tree) same class\$7) same imag\$4	USPAT; US-PGPUB; IBM_TDB	2004/05/25 10:25
4	261	((((hierarch\$4 tree) same class\$7) same imag\$4) same object	USPAT; US-PGPUB; IBM_TDB	2004/05/25 10:27
5	28	(((((hierarch\$4 tree) same class\$7) same imag\$4) same object) same attribute	USPAT; US-PGPUB; IBM_TDB	2004/05/25 10:28
6	5238	(hierarch\$4 tree) same (lower same upper)	USPAT; US-PGPUB; IBM_TDB	2004/05/25 10:58
7	147	((hierarch\$4 tree) same (lower same upper)) same replac\$4	USPAT; US-PGPUB; IBM_TDB	2004/05/25 10:58
8	2	((((hierarch\$4 tree) same (lower same upper)) same replac\$4) same rank	USPAT; US-PGPUB; IBM_TDB	2004/05/25 10:59
9	1862	(hierarch\$4 tree) same rank\$4	USPAT; US-PGPUB; IBM_TDB	2004/05/25 11:00
10	281	((hierarch\$4 tree) same rank\$4) same (succ\$5 replac\$4 chang\$4)	USPAT; US-PGPUB; IBM_TDB	2004/05/25 11:00
11	123	((((hierarch\$4 tree) same rank\$4) same (succ\$5 replac\$4 chang\$4)) same low\$4	USPAT; US-PGPUB; IBM_TDB	2004/05/25 11:01
12	39	(((((hierarch\$4 tree) same rank\$4) same (succ\$5 replac\$4 chang\$4)) same low\$4) same high\$4	USPAT; US-PGPUB; IBM_TDB	2004/05/25 11:01
13	129	((((hierarch\$4 tree) same rank\$4) same (succ\$5 replac\$4 chang\$4)) same (low\$4 down\$4)	USPAT; US-PGPUB; IBM_TDB	2004/05/25 11:01
14	45	(((((hierarch\$4 tree) same rank\$4) same (succ\$5 replac\$4 chang\$4)) same (low\$4 down\$4)) same (high\$4 upp\$4)	USPAT; US-PGPUB; IBM_TDB	2004/05/25 11:04
15	6	((((((hierarch\$4 tree) same rank\$4) same (succ\$5 replac\$4 chang\$4)) same (low\$4 down\$4)) same (high\$4 upp\$4)) same imag\$4	USPAT; US-PGPUB; IBM_TDB	2004/05/25 11:04

L Number	Hits	Search Text	DB	Time stamp
1	136312	hierarch\$4 tree	USPAT; US-PGPUB; IBM TDB	2004/05/25 10:24
2	11898	(hierarch\$4 tree) same class\$7	USPÄT; US-PGPUB; IBM TDB	2004/05/25 10:25
3	765	((hierarch\$4 tree) same class\$7) same imag\$4	USPÄT; US-PGPUB; IBM TDB	2004/05/25 10:25
4	261	((((hierarch\$4 tree) same class\$7) same imag\$4) same object	USPÄT; US-PGPUB; IBM TDB	2004/05/25 10:27
5	28	(((((hierarch\$4 tree) same class\$7) same imag\$4) same object) same attribute	USPÄT; US-PGPUB; IBM TDB	2004/05/25 10:28


IEEE Xplore®
 RELEASE 1.7

 Welcome
 United States Patent and Trademark Office

[Help](#) | [FAQ](#) | [Terms](#) | [IEEE Peer Review](#)
[Quick Links](#)

Welcome to IEEE Xplore®

- ☐ Home
- ☐ What Can I Access?
- ☐ Log-out

Tables of Contents

- ☐ Journals & Magazines
- ☐ Conference Proceedings
- ☐ Standards

Search

- ☐ By Author
- ☐ Basic
- ☐ Advanced

Member Services

- ☐ Join IEEE
- ☐ Establish IEEE Web Account
- ☐ Access the IEEE Member Digital Library

Try our New Full-text Search Prototype GO
[Help](#)

1) Enter a single keyword, phrase, or Boolean expression.
 Example: acoustic imaging (means the phrase acoustic imaging plus any stem variations)

2) Limit your search by using search operators and field codes, if desired.

Example: optical <and> (fiber <or> fibre) <in> ti

3) Limit the results by selecting Search Options.

4) Click Search. See [Search Examples](#)

```
(hierarch* <or> tree)
<paragraph> class*
<paragraph> imag*
<paragraph> object*
```


Note: This function returns plural and suffixed forms of the keyword(s).

Search operators: <and> <or> <not> <in> [More](#)

Field codes: au (author), ti (title), ab (abstract), jn (publication name), de (index term) [More](#)

Search Options:
Select publication types:

- ☒ IEEE Journals
- ☒ IEE Journals
- ☒ IEEE Conference proceedings
- ☒ IEE Conference proceedings
- ☒ IEEE Standards

Select years to search:

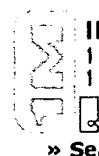
From year: to

Organize search results by:

Sort by:

In: order

List Results per page


Welcome to IEEE Xplore®

- ☐ Home
- ☐ What Can I Access?
- ☐ Log-out

Tables of Contents

- ☐ Journals & Magazines
- ☐ Conference Proceedings
- ☐ Standards

Search

- ☐ By Author
- ☐ Basic
- ☐ Advanced

Member Services

- ☐ Join IEEE
- ☐ Establish IEEE Web Account
- ☐ Access the IEEE Member Digital Library



Your search matched **8** of **1040503** documents.

A maximum of **500** results are displayed, **15** to a page, sorted by **Relevance Descending** order.

Refine This Search:

You may refine your search by editing the current search expression or entering a new one in the text box.

☐ Check to search within this result set

Results Key:

JNL = Journal or Magazine **CNF** = Conference **STD** = Standard

1 Content-based indexing of multimedia databases

Jian-Kang Wu;

Knowledge and Data Engineering, IEEE Transactions on , Volume: 9 , Issue: 6 , Nov.-Dec. 1997

Pages:978 - 989

[\[Abstract\]](#) [\[PDF Full-Text \(428 KB\)\]](#) **IEEE JNL**

2 Attributed relational tree approach to signal classification

Fisher, M.H.; Ritchings, R.T.;

Radar, Sonar and Navigation, IEE Proceedings - , Volume: 141 , Issue: 6 , Dec. 1994

Pages:319 - 324

[\[Abstract\]](#) [\[PDF Full-Text \(368 KB\)\]](#) **IEEE JNL**

3 Using attribute trees to analyse auroral appearance over Canada

Syrjasuo, M.T.; Donovan, E.F.; Peura, M.;

Applications of Computer Vision, 2002. (WACV 2002). Proceedings. Sixth IEEE Workshop on , 3-4 Dec. 2002

Pages:289 - 295

[\[Abstract\]](#) [\[PDF Full-Text \(728 KB\)\]](#) **IEEE CNF**

4 A novel object-oriented approach to image analysis and retrieval

Metzler, V.; Aach, T.; Thies, C.;

Image Analysis and Interpretation, 2002. Proceedings. Fifth IEEE Southwest Symposium on , 7-9 April 2002
Pages:14 - 18

[\[Abstract\]](#) [\[PDF Full-Text \(730 KB\)\]](#) [IEEE CNF](#)

5 Spatial statistical techniques for aggregating point objects extracted from high spatial resolution imagery

Nelson, T.; Niemann, K.O.; Wulder, M.;

Geoscience and Remote Sensing Symposium, 2001. IGARSS '01. IEEE 2001 International , Volume: 4 , 9-13 July 2001

Pages:1663 - 1665 vol.4

[\[Abstract\]](#) [\[PDF Full-Text \(683 KB\)\]](#) [IEEE CNF](#)

6 Image analysis by means of attribute trees-remote sensing applications

Peura, M.; Saltikoff, E.; Syrjasuo, M.;

Geoscience and Remote Sensing Symposium, 1999. IGARSS '99 Proceedings. 1999 International , Volume: 1 , 28 June-2 July 1999

Pages:696 - 698 vol.1

[\[Abstract\]](#) [\[PDF Full-Text \(224 KB\)\]](#) [IEEE CNF](#)

7 A particle system using CSG for description and visualization

Gareau, A.; Excoffier, T.; Tosan, E.;

Computer Animation '94., Proceedings of , 25-28 May 1994

Pages:175 - 183

[\[Abstract\]](#) [\[PDF Full-Text \(712 KB\)\]](#) [IEEE CNF](#)

8 Object registration for visual inspection operations

Cesarini, F.; Marinai, S.; Soda, G.;

Industrial Electronics, Control and Instrumentation, 1994. IECON '94., 20th International Conference on , Volume: 2 , 5-9 Sept. 1994

Pages:988 - 993 vol.2

[\[Abstract\]](#) [\[PDF Full-Text \(552 KB\)\]](#) [IEEE CNF](#)

[Home](#) | [Log-out](#) | [Journals](#) | [Conference Proceedings](#) | [Standards](#) | [Search by Author](#) | [Basic Search](#) | [Advanced Search](#) | [Join IEEE](#) | [Web Account](#) | [New this week](#) | [OPAC Linking Information](#) | [Your Feedback](#) | [Technical Support](#) | [Email Alerting](#) | [No Robots Please](#) | [Release Notes](#) | [IEEE Online Publications](#) | [Help](#) | [FAQ](#) | [Terms](#) | [Back to Top](#)

Copyright © 2004 IEEE — All rights reserved

US-PAT-NO:

5553211

DOCUMENT-IDENTIFIER: US 5553211 A

****See image for Certificate of Correction****

TITLE: Overlapping graphic
pattern display system

----- KWIC -----

Detailed Description Text - DETX (33):

MapLayer is a class formed by modeling map information in a **hierarchical** structure, as shown in FIG. 14, and contains as its internal information the names and the collection of the types of graphic **images** to be drawn. With regard to the MapLayer, the item of Class Layer shown in FIG. 14 shows a **hierarchical** structure consisting of the class Object occupying the uppermost position, the class Model in the **lower** position, and the class MapLayer in the position below that of the Model. The class layers **succeed** to the functions of their **upper-ranking** class layers, as mentioned above. The class MapLayer has the function of map information formed into a **hierarchical** structure. Instance variables correspond to variables used in a program and express, by their


Welcome to IEEE Xplore®

- ☐ Home
- ☐ What Can I Access?
- ☐ Log-out

Tables of Contents

- ☐ Journals & Magazines
- ☐ Conference Proceedings
- ☐ Standards

Search

- ☐ By Author
- ☐ Basic
- ☐ Advanced

Member Services

- ☐ Join IEEE
- ☐ Establish IEEE Web Account
- ☐ Access the IEEE Member Digital Library

[Search Results](#) [\[PDF FULL-TEXT 730 KB\]](#) [PREV](#) [NEXT](#) [DOWNLOAD CITATION](#)


A novel object-oriented approach to image analysis retrieval

Metzler, V. [Aach, T.](#) [Thies, C.](#)

Inst. for Signal Process., Med. Univ. of Lubeck, Germany;

This paper appears in: Image Analysis and Interpretation, 2002. Proceedings of the Fifth IEEE Southwest Symposium on

Meeting Date: 04/07/2002 - 04/09/2002

Publication Date: 7-9 April 2002

Location: Santa Fe, NM USA

On page(s): 14 - 18

Reference Cited: 7

Number of Pages: xi+296

Inspec Accession Number: 7328228



Print Format

Abstract:

Common **image** processing tasks such as quantitative analysis, **classification** **image** retrieval require content-based techniques to firstly detect visually perceptible structures that have a semantic interpretation for a specific observer in a certain context and secondly to describe their properties in a comprehensive way. To achieve these aims, we propose an **object-oriented** approach to **image** interpretation utilizing morphological multiscale decomposition to transform an **image** into a **hierarchical** structure that represents **image objects** by their topological relations and descriptive **attributes**. The **object hierarchy** can be stored in a relational **image** archive which serves as interface to a rule-based expert system that either evaluates **images** directly or compares them with those of the stored **images**. Thus, both **image** analysis and retrieval can be realized by appropriate queries to the expert system. This approach has already been used successfully for quantitative analysis and **classification** of biomedical and aerial **images**.

Index Terms:

[content-based retrieval](#) [data structures](#) [expert systems](#) [image representation](#) [image](#)

[resolution](#) [image retrieval](#) [mathematical morphology](#) [relational databases](#) [visual c](#)
[content-based techniques](#) [descriptive attributes](#) [hierarchical data structure](#) [image](#)
[image interpretation](#) [image processing](#) [image representation](#) [image retrieval](#) [mo](#)
[multiscale decomposition](#) [object-oriented approach](#) [relational image archive](#) [rule-b](#)
[system](#) [topological relations](#)

Documents that cite this document

There are no citing documents available in IEEE Xplore at this time.

[Search Results](#) [\[PDF FULL-TEXT 730 KB\]](#) [PREV](#) [NEXT](#) [DOWNLOAD CITATION](#)

[Home](#) | [Log-out](#) | [Journals](#) | [Conference Proceedings](#) | [Standards](#) | [Search by Author](#) | [Basic Search](#) | [Advanced Search](#) | [Join IEEE](#) | [Web Account](#) |
[New this week](#) | [OPAC Linking Information](#) | [Your Feedback](#) | [Technical Support](#) | [Email Alerting](#) | [No Robots Please](#) | [Release Notes](#) | [IEEE Online](#)
[Publications](#) | [Help](#) | [FAQ](#) | [Terms](#) | [Back to Top](#)

Copyright © 2004 IEEE — All rights reserved